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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/822,448	04/09/2004	Michael Moses Schechter	Schechter	2438

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Michael M. Schechter
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EXAMINER

VANAMAN, FRANK BENNETT

ART UNIT	PAPER NUMBER
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3618

DATE MAILED: 11/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/822,448	Applicant(s) SCHECHTER, MICHAEL MOSES	
	Examiner Frank Vanaman	Art Unit 3618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) 20-43 and 45-47 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-11, 13, 14 and 19 is/are allowed.
- 6) ☒ Claim(s) 12, 15-18 and 44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>7/1/04</u> . | 6) <input type="checkbox"/> Other: _____ |

Election/Restrictions

1. Applicant's election without traverse of Species I in the reply filed on June 6, 2006 is acknowledged.
2. Applicant has asserted the claims readable on the elected species are 1-19 and 44. Claims 20-43 and 45-47 are withdrawn from consideration as being directed to a non-elected invention. An Office Action on claims 1-19 and 44 follows.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the coupling of an engine to a drive wheel (e.g., claim 1, claim 44) or the coupling of the engine to a drive wheel through a transmission (e.g., claim 6) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. Note that while the engine and transmission are illustrated, for example, in figure 2, the coupling of the two and a connection to drive wheels is not illustrated.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

5. Claim 12 is objected to because of the following informality: on line 17 of claim 12, it appears as though a word is missing between "of" and "valve-opening". Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. Claims 12 and 15-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In these claims, certain terms lack a clear antecedent basis, possibly due to the amendment:

Claim 12, line 4, "said volume-decreasing stroke" (claim 1 recites a volume increasing stroke, but not a volume decreasing stroke -- also note claim 16, lines 15 and 31; claim 17, line 15, 39 and 43, throughout claim 18, etc.);

Claim 15, line 4, "said fuel delivery means" (note that a fuel delivery means is recited in claim 2, but not claims 1, 11, or 14 -- also see claim 16, line 4; claim 17, line 4; and claim 18, line 4);

Claim 15, line 20, "said at least one secondary cylinder" (note that a secondary cylinder is recited in claim 10, however in view of the amendment, claim 11 no longer includes the limitations of claim 10 -- also note claim 17, line 2);

Claim 16, lines 17-18, "said at least one primary cylinder" (note claim 18 as well). In general, a term preceded by "said" should have been previously recited in the same claim or in the course of claims from which the claim containing the recitation depends. All claims should be carefully reviewed and revised for clarity under 35 USC §112, second paragraph.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 44 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schechter (US 6,223,846) in view of Grimmer et al. (US 6,695,591). Schechter teaches a vehicle having an engine (10) with a plurality of pistons (14) in a plurality of cylinders (16), which may be used for propulsion of the vehicle, an air-reservoir (56) which can store and deliver compressed air, a control means (70) for controlling the operation of the vehicle in response to driver demand (82, 84, 86, 92, 94, 96, 102, 104, 106) allowing control of braking and propulsion forces, gas exchange controlling means (20, 22, 24) provided for each operative cylinder, fuel delivery and ignition means (26, 28) for adding fuel for combustion, wherein the engine may be operated in a compression braking mode wherein air admitted to at least one cylinder is compressed by the piston and then expelled to be delivered to the reservoir, the air usable to be expanded in the engine for propulsion, wherein the engine is further operable in a conventional combustion mode. The reference to Schechter is discussed above but fails to teach the compression as being multi-stage, i.e., wherein air is compressed in a first cylinder, expelled from the cylinder and delivered to a further cylinder for further compression. Grimmer et al. teach that it is very well known to provide a multiple piston compression arrangement wherein gas delivered to a first group of pistons in cylinders (10, 21, 22, 23) is compressed then subsequently expelled to be delivered to a second set of pistons in cylinders (25, 26) for further compression. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a further stage of compression, as suggested by Grimmer et al., for use in the compression mode of the engine taught by Schechter, for the purpose of further compressing the air taken in, allowing storage at a higher pressure (and smaller volume).

Allowable Subject Matter

9. Claims 1-11, 13, 14 and 19 are allowed.
10. Claims 12, and 15-18, as best understood, would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.
11. Claims 20-43, and 45-47 are withdrawn from consideration
12. As regards claims currently rejected under 35 USC §112, second paragraph, please note that rejections under 35 USC §102 and 103 should not be based upon considerable speculation as to the meaning of the terms employed and assumptions as to the scope of the claims when the claims are not definite. See *In re Steele* 305 F.2d 859, 862, 134 USPQ 292, 295 (CCPA 1962). When no reasonably definite meaning can be ascribed to certain terms in a claim, the subject matter does not become anticipated or obvious, but rather the claim becomes indefinite. See *In re Wilson* 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). As such the currently pending claims may be subject to prior art rejections not set forth herein upon the clarification of the claim language.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Manor (US 3,980,152), Miller (US 4,370,857), Delano (US 4,478,304), Johnson (US 4,596,119), Cunkelman (US 5,885,060), Perry (US 6,629,573), and Tissier (FR 2,507,253) teach vehicle systems of pertinence.
14. Any inquiry specifically concerning this communication or earlier communications from the examiner should be directed to F. Vanaman whose telephone number is 571-272-6701.
Any inquiries of a general nature or relating to the status of this application may be made through either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit: 3618

A response to this action should be mailed to:

Mail Stop _____
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450,

Or faxed to:

PTO Central Fax: 571-273-8300

F. VANAMAN
Primary Examiner
Art Unit 3618

A handwritten signature in black ink, appearing to be 'F. Vanaman', with a date '11/6/06' written below it.